Lego: Embracing Change by Combining Business Intelligence with a Flexible Information System

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CASE STUDY

The LEGO Group, which is headquartered in Billund, Denmark, is one of the largest toy manufacturers in the world. LEGO's main products have been the bricks and figures that children have played with for generations. The Danish company has experienced sustained growth since its founding in 1932, and for most of its history its major manufacturing facilities were located in Denmark.

In 2003, LEGO was facing tough competition from imitators and manufacturers of electronic toys. In an effort to reduce costs, the group decided to initiate a gradual restructuring process that continues today. In 2006, the company announced that a large part of its production would be outsourced to the electronics manufacturing service company Flextronics, which has plants in Mexico, Hungary, and the Czech Republic. The decision to outsource production came as a direct consequence of an analysis of LEGO's total supply chain. To reduce labor costs, manually intensive processes were outsourced, keeping only the highly skilled workers in Billund. LEGO's workforce was gradually reduced from 8,300 employees in 2003 to approximately 4,200 in 2010. Additionally, production had to be relocated to places closer to its natural markets. As a consequence of all these changes, LEGO transformed itself from a manufacturing firm to a market-oriented company that is capable of reacting fast to changing global demand.

LEGO's restructuring process, coupled with double-digit sales growth in the past few years, has led to the company's expansion abroad and made its workforce more international. These changes presented supply chain and human resources challenges to the company. The supply chain had to be reengineered to simplify production without reducing quality. Improved logistics planning allowed LEGO to work more closely with retailers, suppliers, and the new outsourcing companies. At the same time, the human resources (HR) department needed to play a more strategic role inside the company. HR was now responsible for implementing effective policies aimed at retaining and recruiting the most qualified employees from a diversity of cultural backgrounds.

Adapting company operations to these changes required a flexible and robust IT infrastructure with business intelligence capabilities that could help management perform better forecasting and planning. As part of the solution, LEG SAP business suite software. SAP pany that specializes in enterpris tions, is one of the leading softw world. SAP's software products i applications designed to efficien company's essential functions a chose to implement SAP's Supply Management (SCM), Product Lif (PLM), and Enterprise Resource modules.

The SCM module includes ess as supply chain monitoring and forecasting, planning, and inven The PLM module enables mana development processes and syst ule includes, among other appli Capital Management (HCM) ap nel administration and develop

SAP's business suite is based tier client-server architecture th adapted to the new Service-Orie (SOA) available in the latest ver In the first tier, a client interfac graphical user interface (GUI) r laptop, desktop, or mobile devi requests to the application serv servers—the second tier in the process clients' requests. In tur servers send the processed req system—the third tier—which more relational databases. SAP ports databases from different those offered by Oracle, Micros ers. The relational databases o store data on LEGO's products supply chain, and thousands o can easily use the SAP query t from the databases, because it technical skill. Additionally, th ture enables authorized perso access to the database system various locations, including th America, and Asia.

SAP's ERP-HCM module in tures such as "Talent Manage dling employee administratio and time management. These